



AMENDMENTS TO THE CLAIMS

IN A FORMAT COMPLIANT WITH THE REVISED 37 CFR 1.121)

Please cancel claims 6, 13 and 17 without prejudice.

Please add claims 25-27.

RECEIVED

DEC 02 2003

Technology Center 2600

1. (CURRENTLY AMENDED) A time-shifted video method  
comprising the steps of:

buffering an input signal having a digital video format;

compressing said input signal substantially

5 simultaneously with said buffering;

in a real-time mode, delivering a plurality of real-time  
video frames along a first processing path to an output for display  
in response to a digital said input signal, as buffered;

in a time-shifted mode, delivering a plurality of  
10 time-shifted video frames along a second processing path to said  
output for display in response to a digital said input signal as  
compressed, the said time-shifted video frames being delayed  
relative to the said real-time video frames; and

pausing at a particular one of said real-time frames  
15 frame during a transition from the said real-time mode to the said  
time-shifted mode.

2. (CURRENTLY AMENDED) The method of claim 1, wherein ~~the~~ said transition is between ~~the~~ ~~paused~~ said particular real-time frame and a time-shifted version of ~~the~~ ~~paused~~ said particular real-time frame.

3. (PREVIOUSLY AMENDED) The method of claim 1, further comprising providing trick functions during the time-shifted mode.

4. (CURRENTLY AMENDED) The method of claim 1, wherein ~~the~~ said transition ~~mode~~ is triggered by a command of a viewer ~~or~~ ~~an event generated by software.~~

5. (PREVIOUSLY AMENDED) The method of claim 1, wherein the real-time video frames are derived from uncompressed video.

6. (CANCELLED)

7. (CURRENTLY AMENDED) The method of claim 1, wherein ~~the~~ said real-time video frames are derived from said input signal having a compressed video format.

8. (CURRENTLY AMENDED) The method of claim 7, wherein ~~the~~ said real-time video frames are provided from a decoder that decompresses ~~the~~ said input signal ~~compressed video~~.

9. (PREVIOUSLY AMENDED) The method of claim 1, wherein the real-time mode, the time-shifted mode, and the transition are provided by a single codec chip.

10. (CURRENTLY AMENDED) The method of claim 8, wherein ~~the compressed video~~ said input signal comprises MPEG video.

11. (CURRENTLY AMENDED) The method of claim 1, wherein (i) information is stored identifying ~~the paused~~ said particular real-time video frame, and (ii) before the time-shifted mode occurs, ~~a predetermined frame or a next frame of said time-shifted~~ video frames in display sequence after ~~the predetermined~~ said particular real-time video frame is queued up for display.

13. (CANCELLED)

14. (CURRENTLY AMENDED) The apparatus according to claim ~~13~~ 22, wherein ~~the~~ said real-time decoder and ~~the~~ said time-shifted decoder are provided in a single codec.

C 15. (CURRENTLY AMENDED) The apparatus of claim 23,  
having a first processing path for said real-time mode and a second  
processing path for said time-shifted mode.

D 16. (PREVIOUSLY AMENDED) The apparatus of claim 21,  
wherein an encoder and the time-shifted decoder are provided in a  
single codec.

17. (CANCELLED)

18. (PREVIOUSLY AMENDED) The apparatus of claim 23,  
wherein the apparatus comprises a set-top box.

19. (CURRENTLY AMENDED) The apparatus of claim 23,  
wherein ~~the apparatus is configured to present signals~~ said output  
signal is viewable by an analog television.

20. (CURRENTLY AMENDED) ~~A set-top box~~ An apparatus  
comprising:

D a real-time decoder configured to (i) generate a first  
output signal in response to a compressed digital video input  
5 signal and (ii) pause a frame of said first output signal during a  
transition from a first mode to a second mode7.

a frame storage system configured to store said compressed digital video signal separately from said real-time decoder;

10 a time-shifted decoder (i) coupled to the said frame storage system and (ii) configured to generate a second output signal in response to said ~~stored~~ compressed digital video signal, stored in said frame storage system; and

15 a controller configured to generate a command configured to control presenting (i) said first output signal when in said first mode and (ii) said second output signal when in said second mode, ~~wherein said first output and said second output are viewable by a display device.~~

21. (CURRENTLY AMENDED) An apparatus ~~A television receiver~~ comprising:

an input for receiving a video signal in an uncompressed format;

5 a frame buffer directly connected to said input and configured to (i) ~~present an~~ generate a first output signal in ~~response to an uncompressed by buffering said~~ video signal and (ii) ~~pause a frame of said~~ first output signal at a frame during a transition from a first mode to a second mode;

10 a frame storage system directly connected to said input  
and configured to store said ~~uncompressed~~ video signal separately  
from said frame buffer; i

a time-shifted decoder configured to generate a second  
output signal in response to said ~~stored uncompressed~~ video signal  
15 stored in said frame storage system; i and

a controller configured to generate a command configured  
to control presenting (i) said first output signal when in said  
first mode and (ii) said second output signal when in said second  
mode, ~~wherein said first output and said second output signal are~~  
20 ~~viewable by a display device.~~

22. (CURRENTLY AMENDED) An apparatus ~~A set-top box~~  
comprising:

5 a controller configured to receive (i) a first command  
and (ii) a ~~compressed digital~~ video input signal in a compressed  
format; i

a ~~frame-buffer~~ real-time decoder configured to (i)  
generate a first output signal in response to the ~~compressed~~  
~~digital~~ decompressing said video input signal and (ii) pause a  
frame of said first output signal during a transition from a first  
10 mode to a second mode; i

a frame storage system coupled to ~~the~~ said controller, to exchange said video input signal; and

15 a time-shifted decoder coupled to ~~the frame storage system and the~~ said controller and configured to generate a second output signal in response to (i) said ~~compressed digital~~ video input signal received from said controller, and (ii) said first command;

20 wherein ~~the~~ said controller is further configured to generate a second command ~~configured~~ to control presenting (i) said first output signal when in said first mode and (ii) said second output signal when in said second mode, ~~wherein said first output and said second output are viewable by an analog display device.~~

23. (CURRENTLY AMENDED) An apparatus comprising:

5 a frame buffer configured to (i) generate a first signal in response to ~~a digital~~ an input signal having a digital format and (ii) pause said first signal at a real-time frame during a transition from a real-time mode to a time-shifted mode;

a buffer;

10 an encoder configured to generate a second signal in response to said ~~digital~~ input signal, wherein said second signal is (i) stored in ~~a~~ said buffer and (ii) retrieved ~~separate from~~ after being stored; and

a ~~controller~~ switch configured to present an output signal comprising (i) said first signal when in said real-time mode and (ii) said ~~retrieved~~ second signal retrieved from said buffer when in said time-shifted mode.

24. (ORIGINAL) The method according to claim 2, wherein said transition is seamless to a viewer.

25. (NEW) The method of claim 1, wherein said transition is triggered by an event generated by software.

26. (NEW) The apparatus according to claim 21, wherein said frame storage system comprises:

an encoder directly connected to said input and configured to compress said video signal; and

5 a storage buffer configured to buffer said video signal along a processing path between said encoder and said decoder.

27. (NEW) The apparatus according to claim 22, further comprising a demultiplexer configured to demultiplex said video input signal to said real-time decoder and said controller.